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BRIEFING PAPER

PROS AND CONS SUPPORTING THE
RATIONALE FOR ERECTION OF
EITHER A SPECIAL PURPOSE USE
OR A PEOPLE USE BUILDING IN
A PROPOSED NEW BUILDING
PROGRAM, HEADQUARTERS COMPOUND

Real Estate and Construction Division
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INTRODUCTION

The continuing desire of the Agency to implement a new building program at the Headquarters site has resulted in various previous planning exercises which have addressed this need. The impact of the changes and transitions occurring within the Agency and its present dispersed location of functions has created a sense of urgency and timeliness to actively address a potential new building program to consolidate the Agency at Langley. Reestablishment and current staffing of the Building Planning Staff (BPS/RECD/OL) is intended to address and evaluate Agency facilities posture and potential conceptual options in detail in order to influence a determination of the most effective direction for a new Agency building program.

In the interim, much interest has been generated relative to the kind of building which should be erected. The following briefing paper will provide an overview, address the relevant issues of long-range Agency facilities planning, and more specifically discuss the pros and cons which would influence the determination to erect a building on the Langley campus designed for "Special Purpose Use" or "People Use." This paper is intended as a medium for discussion, as a point of departure, and as a vehicle through which a collection of impacting conceptual variables could be presented in order to shed more light upon where we are and where we may be going as a basis for present and future decisionmaking.

GENERAL

Throughout the years, the Agency has strived to consolidate its Headquarters functions and holdings at one central location. Due to the approval of less than required appropriations from the Congress, only a portion of the Agency was provided for in the new Headquarters Building at Langley in early 1960. The remainder of Agency functions were eventually relocated from temporary buildings to permanent building satellite complexes in Washington, D. C. and Northern Virginia. The operational inefficiencies of such separation of functions has led to continuing support to consolidate as much of the Agency as possible in whole or in part on the Langley Headquarters compound. Other impacting factors influencing and supporting consolidation have been the increasing demands for personnel operating efficiency; the efficiency of maintenance, use, and operation of facilities as created by reductions in personnel; the requirements of energy conservation; and environmental considerations.

INTERIM HEADQUARTERS CONSOLIDATIONS

The theme of consolidation in increments to achieve total consolidation has been quite effective. Several years after the occupancy of Headquarters Building, the Printing Services Building was constructed on the Headquarters site. In 1974, the new Headquarters Motorpool Garage was completed and occupied. A new classified waste destruction Hammermill Building will be constructed on the site within the next year.

INTERIM HEADQUARTERS PLANNING EFFORTS

In 1966 an ad hoc study group analyzed Agency space posture and recommended the need for further and serious consideration for the design and construction of a "Special Purpose Technical Building" in which all existing and proposed technical functions could be consolidated at the Headquarters site.

LONG-RANGE HEADQUARTERS PLANNING EFFORTS

A Building Planning Staff was established in 1969. Its major contributions consisted of an interim partial consolidation plan involving expansion of the Printing Services Building and the implementation of a Preliminary Master Plan conceptualizing the consolidation of Metropolitan Washington area (MWA) Agency functions other than the National Photographic Interpretation Center (NPIC) and the Central Depot on an expanded Headquarters site. The Preliminary Master Plan was approved by the National Capital Planning Commission (NCPC), and through coordination with the Environmental Protection Agency (EPA), a determination was made that the Preliminary Master Plan concept would not have adverse effects upon the environment.

LONG-RANGE EXTERNAL FACILITIES POSTURE

Leased Buildings

Forthcoming negotiations of leases on all commercially leased buildings will occur within the next year. Lease arrangements are intended to provide the flexibility necessary to be compatible with a seven- to ten-year time frame anticipated for implementation of Agency consolidation at Headquarters. As soon as Magazine Building is replaced, it is felt that all Agency

commercially leased space will be of excellent quality and will be maintained and operated under sound, proven, and reliable management.

Government-owned Buildings

External federally owned buildings occupied by the Agency appear to pose no major long-range problems. Ongoing construction in newly acquired space on the sixth floor of should provide NPIC with sufficient long-term expansion if no extraordinary taskings are imposed upon its present mission. Continued Agency occupancy of the 2430 E Street Complex appears certain and unlimited. A major factor requiring its long-term tenure is the existence of satellite telephone equipment systems in Central Building through which all telephone switching for "Downtown Agency components" is accomplished. The only potential threat to continued occupancy could be the contiguous location of this complex to State Department Headquarters. It is understood that the State Department has expressed interest in these facilities in the past. STATINTL

PROS AND CONS SUPPORTING THE RATIONALE FOR ERECTION OF EITHER A SPECIAL PURPOSE USE OR PEOPLE USE BUILDING IN A PROPOSED NEW BUILDING PROGRAM, HEADQUARTERS COMPOUND

General

The following discussion presents various arguments which are supportive of each building type under consideration and includes relative disadvantages of each alternative. It also suggests the consideration of another achievable option and approach which may be more adaptive to variable Agency needs. The intent, scale, scope, and conclusions of this paper are

subject to the influences and impact of various factors which require further extensive study and evaluation. For the purposes of this paper, and in order to properly address the above subject, a statement of relevant assumptions, parameters, and yardsticks, which may influence or have a bearing upon the following rationale is presented as follows:

Assumptions

1. Total consolidation of external MWA Agency functions at the Headquarters site is feasible, desirable, and efficient.
2. Total consolidation at Headquarters can be implemented in a one new building concept.
3. Agency property at the Headquarters site is adequate to house a new facility of the size required.
4. Agency components and functions from either or both Headquarters Building and external facilities would be relocated into the new facility.
5. Headquarters Building is overcrowded and using undesirable space for office functions.
6. Headquarters Building special purpose space is located in a marginal and restrictive environment.

Parameters

Variable Impacting Parameters

1. Timing.
2. Flexibility of external leases.
3. Changing personnel numbers.
4. Reductions or expansion of functions.

5. Compatibility of organizational grouping.
6. Acceptability of functional separation.
7. Necessity of functional unity.
8. Requirement of operational continuity.
9. Energy conservation.
10. Environmental impact.
11. Impact of technological advances of Agency operational systems upon utilities support systems.

Parameters of Approach

1. Consider immediate Headquarters Building requirements and problems only.
2. Consider external buildings requirements and problems only.
3. Consider a combination of all or part of Headquarters and external facilities requirements and problems.

Cost Assignment

In order to establish a cost yardstick for general discussion purposes, a general assignment of costs for this building program has been projected and is submitted as Attachment 1. Cost factors used are a measure of current average square foot costs of pure office buildings and special purpose buildings in the construction industry. Total project costs also include projected yearly cost escalation; projected costs for architectural and engineering (A&E) design services, General Services Administration (GSA) services, and contingencies. Total area requirements have been determined on the basis of a ratio of 75 percent net area space to 25 percent gross area space. Cost assignments

should be interpreted as general "ballpark" estimates for comparative purposes at this time. More accurate estimates will be available as specific requirements are identified through further study and project development.

Pros and Cons of a New People Use Building

- . The concept of erecting a new people use building on the Headquarters site would surmise that pure office space functions would be relocated from existing external and Headquarters facilities and that the lower two floors of Headquarters Building would house all special purpose functions in the future.
- . A new office building would relieve the tight overcrowded office space conditions in Headquarters Building, remove office use functions from less than desirable space on the lower two floors, and provide expansion and relocation space for special purpose functions in space more suitable for such use.
- . The separation of pure office from special purpose space is not possible in all instances due to necessary organizational and functional relationships. Therefore, such organizational factors limit the number of pure office components that can be considered for a new pure office building.
- . In view of continuing Agency concern for energy conservation, systems efficiency, and the appropriate use of resources, the application of advances in the state of the art of building utilities systems and space design relative to energy conservation

and building layout concepts in a new office building could be most beneficial to the Agency in addressing and solving more of its perplexing space, personnel comfort, and environmental control problems.

- . Consolidation of special purpose^{areas} in the Headquarters Building appears logical in view of the investment in large sunk costs for previous facilities modifications and upgraded utilities support systems. Such consolidations would also appear to enhance more efficient use of existing utilities support systems, and reduce total energy use relative to decentralized systems.
- . The Headquarters Building and its utility systems were designed and scaled for standard office use and for minimal special purpose functions. The continuing increases in special purpose use functions and the policy of utilities support systems redundancy has resulted in the installation of extensive and independent backup support systems. Past and current special purpose area increases have incurred two major phases of utilities system expansions. Known immediate future Headquarters requirements and trends to 1980 project three more major utilities systems expansions. Consolidation of all external building special purpose functions in Headquarters Building will undoubtedly require additional major phases of utilities system expansion and further complicate an already difficult situation.

- . Expansion of utilities support systems has surpassed the equipment and space capacities of utilities rooms and is requiring the use of operational space in Headquarters Building. Further projected increases will require more operational space in less than desired locations. The rising congestion and fragmentation of these systems is being achieved at the expense of systems reliability and a potential increased threat of systems malfunction or failure.
- . Potential Headquarters Building constraints in the areas of ventilation and plumbing systems may limit or even preclude installation of laboratories and large-scale photographic processing dark rooms relocated from external facilities. The sophisticated ventilation and plumbing systems required are not compatible with existing standard building utility systems and, due to the nature of their required distribution, it may not be possible to install such systems.
- . The design and operational mode of the Headquarters Building standard power system allows for systems redundancy and the use of only one half of the total standard power capacity available. If standard systems redundancy was not required, total power capacity would be available but total power outages would occur due to partial equipment malfunction or failure. Under these conditions much of our expanded power requirements for new special purpose areas could be provided from existing power resources and avoid the major power expansions to suit redundancy criteria.

- . Recent studies concluded that environmentally sensitive equipment (ESE) areas in the Headquarters Building are operating under marginal environmental conditions and recommended relocation and state of the art modifications to first floor space to ensure continued and uninterrupted operation of these functions. If all special purpose areas are to be consolidated in Headquarters Building, new relocation facilities for presently marginal ESE areas should be implemented as recommended.
- . The questionable suitability and practicality of continued adaptation of Headquarters Building for special purpose functions, as compared to the potential benefits of providing new updated facilities for all ESE functions in a new special purpose building, raises serious question as to the feasibility of constructing a new pure office-type building on the Headquarters site.

Pros and Cons of a New Special Purpose Use Building

- . The concept of erecting a new special purpose use building on the Headquarters site would surmise that all special purpose space functions would be relocated from existing external and Headquarters facilities and that Headquarters Building would house all pure office functions and office support functions in the future.
- . Special purpose space in Headquarters Building and external facilities has always been adapted within an inadequate office space designed environment. A new special purpose use building would provide the ideal physical, technical, and state of the

art operational environment required for adequate support and reliable performance of these functions. The design and erection of a special purpose facility with a central predesigned expandable utilities systems potential would also provide an organized and built-in vehicle for growth and change.

- . The expansion potential of special purpose areas and related utilities support areas in Headquarters Building is restricted by permanent physical barriers. Desired functional expansions occur in dispersed locations and utilities support systems expansions are usurping increased quantities of operational space in decentralized locations. A new special purpose building would provide maximum space expansion potential in all directions through a planned design strategy of placing functional but easily movable buffer zones around the periphery of such functions.
- . The large Agency investment in sunk costs for previous expanded special utilities support systems serving special purpose areas would not be lost. Such systems could be made to serve standard office functions in Headquarters Building and other systems could serve the proposed new special purpose building. For example, the following effective use of such systems could be achieved:

1. The existing and proposed second 2,500 kW critical generators could be made to serve the new special purpose building.

2. The existing and proposed Uninterruptible Power Systems could be easily dismantled and relocated to serve the new special purpose building.

3. The existing and ongoing power vault expansions could serve increasing office use needs and special purpose functions which must remain in Headquarters Building, and also provide higher capacity standard power systems redundancy.

4. Major independent air conditioning systems in Headquarters Building could provide for the standard building winter season cooling load and eliminate the winter operation of power-house air conditioning systems.

5. If a critical generator is retained for Headquarters Building use, it could serve the critical needs of minimal special purpose areas, sensitive office functions, and standard building ventilation systems during commercial power outages.

. In general, space on the ground and first floors of Headquarters Building is not considered highly desirable people use space. Although it may appear undesirable in a classical office use sense, it would be most ideal for wide open office use applications of the relatively new landscape planning concept which is becoming widely and successfully used in Government and private industry. Other people-office related functions requiring deep wide open space such as map library collections, major storage requirements, centralized conference centers, briefing rooms, file rooms, situation rooms, and multi-purpose general personnel use areas could also be ideally adapted to this ground and first floor space.

. The erection of a special purpose building with its predesigned flexibility of use and utilities support expansions would appear

to be most beneficial to the Agency since it is creating a facility to be used in the present and the future for the purpose it was designed. This concept could eliminate the recurring cause and reaction approach to our cyclic special use needs in Headquarters Building and avoid the unending perpetuation of less than ideal solutions to our pressing needs in a marginal Headquarters Building environment. In the event of future national emergencies or conditions of operation necessity where, for some justifiable reason, new special purpose accommodations must be accomplished in Headquarters Building, existing special utilities systems and wide open space will be available to serve them as a fallback position.

Conclusions

The above discussion presents many logical reasons which support the conclusion that the erection of a people use or a special use building would provide most beneficial advantages in varying degrees. However, under each of these concepts, adequate but less than ideal options appear to be available in restrictive conditions and space to be vacated in Headquarters Building. Such concepts and relative options appear to suggest that the selection of a building type on an "either-or" basis may not solve the totality of our people and special use facilities problems. These outlooks may maximize the solution of one part of the problem at the expense of a lesser solution to the other. The ideal approach to our problem would be to maximize the solution to both people and special use problems in one positive effort.

The maximized solution to this two-pronged problem would suggest the erection of a facility adequately designed to suit both people use and special purpose use functions. The state of the art design that is supportive of ideal solutions to independent people use or special purpose use buildings could be equally and effectively incorporated as separate systems in a combined people/special purpose use building. The realities of organizational relationships and the requirements of functional unity between people use and special use space could be most ideally solved in a dual use building. This approach could provide adequate new facilities for an infinite number of options which would allow flexible rearrangements of people use and special purpose use functions between Headquarters Building, external buildings, and a new dual-purpose building in response to continually changing organizational and operational needs.

One must not view present Headquarters Building problems as a measure of multi-purpose building shortcomings. It was designed essentially as a standard office building. Its inherent and continuing problems derive from modifications imposed upon it to house critical large-scale special purpose functions and sophisticated needs beyond the scale of its original design. Adequately designed and adaptable dual purpose buildings have been and can be designed in the future to provide for any and all of the Agency's present or future needs.